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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,204	05/04/2006	Jeroen Gijzen	US030417	2760
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EXAMINER CARTER, WILLIAM JOSEPH				
ART UNIT 2875		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,204

**Applicant(s)**

GIJZEN ET AL.

**Examiner**

WILLIAM J. CARTER

**Art Unit**

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-26 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 04 May 1996 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 11 is objected to because of the following informalities:

In claim 11, line 5, "the created vortex" lacks antecedent basis.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-20, and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basey (2002/0141188) in view of Takahashi et al. (6,227,686).

With respect to claims 1 and 5, Basey teaches a lamp assembly (10), comprising: a reflector (12) having an opening defined by an upper rim and a concave reflective surface surrounded by the upper rim (Fig. 4); an illumination element (34) mounted within the opening of the reflector (Fig. 4); an air guide conduit (14) having air conducting walls (28) that extend for a substantial length in a direction around the upper rim of the reflector (Fig. 4), the air guide conduit having an air inlet (left side of items 28 in Fig. 4) and having an air outlet (right side of items 28 in Fig. 4) into the opening of the reflector (Fig. 4); and a blower (paragraph 12) to the air inlet of the air guide conduit (paragraph 12 and Fig. 4), wherein the blower introduces air into the air inlet tangentially

with reference to the air conducting walls (Fig. 4). Basey does not explicitly teach the blower operatively connected to the air inlet and the concave reflective surface defines a parabolic or elliptical opening in the reflector. Takahashi, also drawn to lamp assemblies, teaches a blower (6) operatively connected to the air inlet (Fig. 1) and the concave reflective surface defines a parabolic or elliptical opening in the reflector (column 2, lines 24-29). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the blower and reflector of Takahashi in the lamp assembly of Basey, in order to provide a lamp assembly that can reduce the risk of rupture of the illumination element and degradation of light emitting property and can safely be replaced even if the illumination element is ruptured (column 1, lines 36-40).

As for claim 2, Basey teaches the air outlet (right side of items 28 in Fig. 4) of the air guide conduit (14) has an air conducting inner side wall (28) that extends into an inner periphery of the upper rim of the reflector (Fig. 4).

As for claim 3, Basey teaches the air outlet (right side of items 28 in Fig. 4) extends circumferentially adjacent the inner periphery of the upper rim of the reflector (Fig. 4).

As for claim 4, Basey teaches the air outlet is defined between the upper rim of the reflector and the inner side wall of the air guide conduit (Fig. 4).

As for claim 6, Basey teaches the air guide conduit (14) circumferentially overlaps and extends into the opening in the reflector (Fig. 4).

As for claim 7, Basey teaches the air outlet (right side of items 28) is located at the circumferential overlap between the air guide conduit and the opening in the reflector (Fig. 4).

As for claim 8, Basey teaches the opening in the reflector faces towards an optical modulator of a projection display device (paragraph 12) and wherein the air outlet is configured to direct air out of the reflector in a direction towards the optical modulator (it is seen in Fig. 4 that air travels to the bottom of the reflector then out through item 32 which is located at the top of the reflector which is in a direction of the optical modulator).

As for claim 9, Basey teaches the air conducting walls comprise an air conducting outer wall (20 and 22) extending beyond (vertically beyond) and circumferentially around an outer periphery of the upper rim of the reflector (Fig. 4), and an inner side wall (24 and 26) extending circumferentially around an inner periphery of the upper rim of the reflector (Fig. 4).

As for claim 11, Basey further teaches the cooling means (paragraph 12) for creating a vortex and introduces the created vortex tangentially into the opening such that the created vortex travels down the concave reflective surface of the reflector (Fig. 4).

As for claim 12, Basey teaches the illumination element (34) is coaxially mounted within the opening of the reflector (Fig. 4), and wherein said cooling means (paragraph 12) introduces the vortex into the opening such that the vortex is reflected from a bottom of the concave reflective surface back towards the upper rim of the reflector (Fig. 4).

As for claims 13-15, Basey further teaches cooling means (paragraph 12) introduces the vortex into the opening such that the portion of the vortex which is reflected back towards the upper rim is coaxially contained within the portion of the vortex which travels down the concave reflective surface of the reflector (Fig. 4).

As for claims 16-20, Basey and Takahashi teaches all of the disclosed elements, as discussed above, thus the method is inherently taught.

As for claim 22, Basey further teaches a vortex is created prior to introduction of the air into the opening (Fig. 4).

As for claims 23 and 24, Basey further teaches the vortex has a swirl of a degree about a center of the swirl prior to the introduction into the opening (Fig. 4). Basey and Takahashi do not explicitly teach the degree being greater than 90 degrees, but one of ordinary skill in the art would have been led to the recited dimensions through routine experimentation and optimization. Applicant has not disclosed that the dimensions are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears *prima facie* that the process would possess utility using another set of dimensions. Indeed, it has been held that mere dimensional limitations are *prima facie* obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See also MPEP 2144.04(IV)(B).

As for claim 25, Basey further teaches the vortex is introduced tangentially with reference to the upper rim, into the opening (Fig. 4).

As for claim 26, Basey further teaches introducing the created vortex comprises an act of introducing the vortex tangentially with reference to the upper rim, into the opening (Fig. 4).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Basey and Takahashi as applied to claim 9 above, and further in view of Glowach, SR. et al. (2001/0030865).

With respect to claim 10, Basey and Takahashi teach all of the claimed element, as discussed above, except for explicitly teaching an inner side wall partially extends into the opening and is spaced from the inner periphery of the upper rim to define the air outlet there between. Glowach, also drawn to lamp assemblies, teaches an inner side wall (47) partially extends into an opening (Fig. 3) and is spaced from the inner periphery of the upper rim to define the air outlet there between (Fig. 3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the inner wall orientation of Glowach in the lamp assembly of Basey, in order to assist in directing air to the face of the lamp (paragraph 34).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Basey and Takahashi as applied to claim 1 above, and further in view of Romano et al. (5,626,416).

With respect to claim 21, Basey and Takahashi teach all of the claimed elements, as discussed above, except for explicitly teaching the substantial length of at least one

of the air conducting inner side walls extends more than half-way around the upper rim of the reflector. Romano, also drawn to cooled lamp assemblies, teaches a substantial length of at least one air conducting inner side walls (space between 18 and 20) extends more than half-way around an upper rim of the reflector (Figs. 2 and 3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the substantial length of Romano with the air conducting inner side walls of Basey, in order to cool the reflector and the lamp (column 2, line 66-column 2, line 12)

### ***Response to Arguments***

Applicant's arguments filed 16 March 2009 have been fully considered but they are not persuasive. The Applicant argues that "creating a vortex" in claim 11 is antecedent basis for "the created vortex" of claim 12. Contrary to the Applicant's arguments only the term "vortex" has antecedent basis in claim 11, not a "created vortex."

The Applicant argues that each air guide conduit of Basey does not cover "a substantial length of the upper rim of the reflector." The Examiner discussed in prior office action that the length was very broadly claimed because this length is not defined in claim 1. Therefore the length could be 0.0000001 degrees of the upper rim and therefore the air guide conduit of Basey would cover 100% of this length and therefore definitely "extend for a substantial length in a direction around the upper rim."

The Applicant argues that Basey does not teach "creating a vortex and introducing the created vortex into the opening." As admitted by the Applicant the air



guide conduit of Basey does have curvature and as shown in Fig. 4 the air guide conduit of Basey introduces air flowing in a curved path into the opening, and therefore Basey does in fact teaches "creating a vortex and introducing the created vortex into the opening." Further this vortex is shown as being introduced along the walls of the air conducting walls and along the walls of the upper rim and therefore tangentially with reference to the air conducting walls and the upper rim (Fig. 4).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM J. CARTER** whose telephone number is (571)272-0959. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571)272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Wjc  
7/3/09

/Ali Alavi/  
Primary Examiner, Art Unit 2875